Coursera Capstone Project
IBM Applied Data Science Capstone

Living in Hokkaido, Japan

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May 2021

Background

❖ Hokkaido is the second largest island of Japan

❖ The largest city is its capital, Sapporo

   ❖ Only designated city in Hokkaido, having a population greater than 500,000

❖ Hokkaido has the third largest population of Japan's five main islands

❖ Districts: 74

❖ Municipalities: 179

   ❖ Made up of cities, towns, and villages

Business Problem

❖Location is one of the most important things that will determine the level of enjoyment you have in a new home

❖Objective: Determine whether this part of Hokkaido is right for you to live at by analyzing the location and its surrounding areas

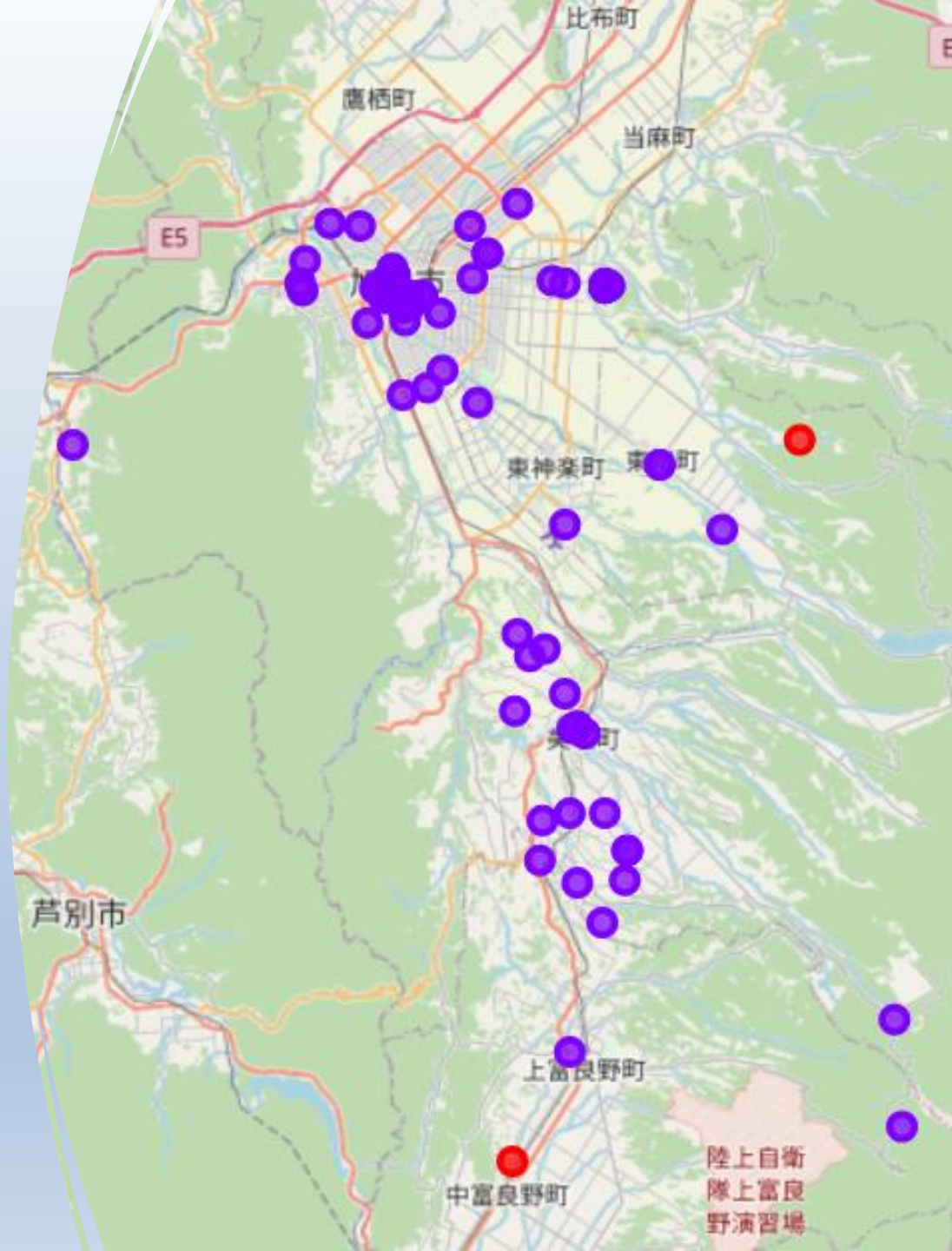❖Business Problem: Will a potential new homeowner want to move here?

Data

- Required Data
  - List of Subprefectures in Hokkaido
  - Geographical coordinates
  - Venue data, specifically located in a specified area
- Sources of Data
  - Wikipedia page
    (https://en.wikipedia.org/wiki/Subprefectures_of_Hokkaido)
  - Geocoder package
  - Foursquare API

Methodology

❖ Use Geocoder to get latitude and longitude coordinates

❖ Use Foursquare API to get venue data

❖ Sort through venue data

❖ Perform clustering on the data by using k-means clustering

❖ Visualize clusters with a map using Folium

Results

- Categorized venues into clusters
  - Cluster 0: (RED) Venues that are not located in a specific neighborhood
  - Cluster 1: (PURPLE) Venues that are located near or around cities.

Summary

- If you are an outgoing person, move to an area close to many venues

- If you prefer peace and quiet, avoid areas with tight groups of venues located close to each other

- The findings of this project will help prospective new homeowners ensure that they will enjoy their new home to its fullest.